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ABSTRACT

Reuven Feuerstein's Learning Potential Assessment Device and Instrumental Enrichment (LPAD/IE) system presents a valid approach to assessment, which moves from constructs, to pedagogical theory, to instruments, and to remedial strategies. This system uses standardized tests in a standard approach, but not for the purpose of the quantification of ranks for students. The system is used to set up the strategies for precision remedial teaching. Testing practice will be improved, the communication between assessors and teachers will be more validly grounded, and, above all, the LPAD/IE principles are generic to pedagogy. The adoption of an LPAD/IE approach must be followed by a massive inservice and public information effort. Otherwise, the LPAD/IE system will be seen merely as an alternative way of ranking by intellect for permanent placement in a category. (Author/PN)

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The Learning Potential Assessment Device and Instrumental Enrichment as a Paradigm Shift

by

Asa G. Hilliard, III

(American Educational Research Association Annual Meeting, New York, March, 1982. Symposium on Feuerstein LPAD/IE with J. Magoon, convener; and C. Haywood, A. Hilliard and Y. Rand presenting)

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Reuven Feuerstein's LPAD/IE system is a novel contribution to the field of measurement and education. Both the LPAD and IE not only aim at the destruction of predictive validity as we have known it, they will challenge as well the fixation on the function of prediction in pedagogy. Once the static nature of traditional status assessment has been challenged successfully, a real new beginning will be possible for testing to serve instruction. It is not only the traditional I.Q. instruments, but the entire conceptual apparatus which supports the use of such instruments which either must be reconstructed or abandoned altogether.

Feuerstein's contribution represents a fresh start. Not only is the concept of modifiability 180 degrees away from traditional stasis assessment, Feuerstein has given us one of the few and perhaps the only valid approach to date, which moves from constructs, to pedagogical theory, to instruments, and to remedial strategies. The differences between the LPAD/IE system and traditional I.Q. based assessment are so great, that once the differences are understood generally, fundamental changes will be forced in the practice of educational psychology. Although the fact that some of the instruments which are utilized in the LPAD/IE, such as the Raven's coloured progressive matrices type problem, may appear to be the same, or even in some cases, identical to some older testing instruments, Feuerstein's use of those instruments is revolutionary.

The decision to attempt to understand problem solving dynamics and the belief that it is possible to intervene to shape that process, along with the demonstrated success in doing just that by skilled users of both LPAD and IE, should result ultimately in wholesale positive changes in professional practice.

Having attended workshops led by Feuerstein and his associates at Yale University, and having observed both IE and the LPAD in practice; and having worked directly with a number of children using the materials, there is one thing which has continued to impress me. Students become quickly and enthusiastically engaged in LPAD/IE activities. Over and over again, I have seen students who were labeled retarded, or who some professionals had thought might be retarded, come to life as they experience the power of learning prestigious, complex and difficult tasks. Their self-image and self-esteem is transformed in a very short period of time as their achievement increases.

In my own work with Dr. Grace Massey and the late Dr. Jean Carew (Massey, Hilliard and Carew, 1981), we were interested in "normal" departures from the "norm" in the measurement of toddler development. Our video taped protocols of toddlers who were taking the Bayley developmental scales showed clearly that a simple global score was really a stasis score which masked many significant things. For example, we observed a group of toddlers who we chose to describe as "creative," as contrasted with another group of more conforming children who we classified as traditional. The conforming acquiescent children had the highest scores. However, the video taped protocols showed the creative group tended to follow their own agenda. They were less willing to "play-the-game" but did not appear to us to be less able. In fact, they appeared to be much more able than the other groups. They simply got no credit for some of the complex, novel and unexpected things which they did, nor could we rule out their ability to do the "failed" tasks that they were clearly just unwilling to do.

Clearly, there is much more to respondent behavior than traditional assessment can reveal. Consequently, we should

expect traditional assessment error of major proportion in both any description of present level of functioning and in judgments derived from testing to assist in the design of valid instruction.

A word must also be said about traditional options among instructional "treatments." Since the goal of traditional assessment is to predict future performance in order to assign students to differentiated "appropriate" pedagogical treatments or methods, such treatments must exist in fact if the predictive model is to work. Although many teaching strategies are presented in professional education coursework, and although some may be valid, there is no such thing as an accepted "standard procedure" for teaching the gifted, average, or retarded learners. We may best describe the existing situation as methodological anarchy. The pros and cons of such a situation need not be debated here, unless the value or validity of the extant traditional assessment system is questioned. What possible pedagogical utility could there be for an assessment system which is based on prediction and categorical labeling, when the presumption of a differentiated pedagogy cannot be substantiated? Empirical observations of gifted, average, and retarded classes will not reveal common practices differentiated by category, let alone valid categorical practices.

Many educators are no strangers to the fact that skilled teaching can help low achieving students to make great leaps in academic performance. It happens everyday in public and private schools throughout the nation (Hilliard, 1981). The Marcus Garvey Elementary School in Los Angeles, the Dunbar Elementary School in Atlanta, The Pease Elementary School in Austin, Texas, the Oakland Community School in Oakland, California, the Nairobi Day School in East Palo Alto, California, are but a few of the schools which have a long and solid track record of student academic achievement, as mea-

sured in traditional terms. For years, success stories such as these have been regarded by professionals as isolated anomalies, if indeed they were believed to exist at all. In my experience, when one reports on such schools, educators have tended to regard the information as anecdotal, and have tended to regard anecdotal data as inconsequential, atypical, and non-replicable.

The traditional professional forecasts for most low achievers has been that they would remain so. In fact, the low achievement has often been taken as a certain indicator of low intellectual capacity. The basic assumptions of current assessment practice make this definite, since the goal of present I.Q. based assessment is merely to find or to identify students according to "potential" so that they may be placed in known tracks where certain outcomes are expected (Hilliard, 1981) (Hilliard, 1982).

Research in education has been focused effectively on teaching only during a very recent period, much of it coming in the 1970s and 1980s. We have tended to look for learner traits or characteristics, family SES background variables, and racial or cultural differences in intellect to explain variation in achievement. Moreover, we have selected the function of prediction as the highest work for professional educational psychologists. It may be no exaggeration at all to say employers expect little else from school psychology other than I.Q. forecasting for placement in the right track.

Both teaching and testing are under attack. In both cases, the validity of what is offered claims the attention of the attackers. If either or both are invalid, then the relationship between them can be nothing other than invalid. There is a body of literature on testing and a body of literature on teaching as well, as a body of litereature on students. However, there is not much, if anything, on the nature of the dynamic interaction between them. For exam-

ple, Snow and Cronbach's "aptitude treatment" interaction is merely an attempt to describe the statistical relationships among essentially static measures of "aptitude" and "treatment." ( )

The history of testing in education has been the history of the analysis of static evidence or data. In fact, the critical weakness of the use of I.Q. testing in schools is less with the popularly discussed questions of cultural bias and predictive validity than with the simple fact there is not a shred of empirical evidence that the predictive function itself, based on an attempt to do a global ranking of students by intellect, serves any valid pedagogical function at all. In other words, there are no data to show that teaching or learning are improved as a consequence of the use of I.Q. tests.

Under the present system of I.Q. test use in the schools, we look at a static measure of what is supposed to be intellect, and compare the results to a static measure of achievement. We do not know what happens in between. We are organized and predisposed to see answers to questions. We are set up to treat a given answer as if it has the same meaning for each respondent. Our present system of testing yields no important knowledge of the learning process and no knowledge of the teaching treatment. We know the answers which are given, but do not know what is behind the answers. Therefore, test givers are not in a position to help teachers to know how to respond to what is behind them.

One of the things which is behind a given answer is the presence or absence of some generic skills or thinking conventions which may, with appropriate mediation be acquired by a student, as a language. When neither student nor teacher understands that there is something behind the answers, or more precisely what is behind them, the failure of a student to learn will produce frustration, hopelessness, despair, withdrawal, defensiveness and so forth.

In short, appropriate teaching must be addressed to what is in between the mythical "intellect" and student achievement. Further, appropriate teaching is valid teaching. Reuven Feuerstein's Learning Potential Assessment Device (LPAD) and Instrumental Enrichment (IE) system is, to my knowledge, the only "game in town" at present -- not that it has exhausted all the possibilities by any means. However, it has a theory of learning, a theory of teaching, validated strategies for teaching which flow from the theories and academic achievement results to show for it.

I make the assumption that learners learn best when they are able to see what is going on. Precision feedback from a supportive teacher helps this to happen. Teachers ultimately are unique individuals who teach a number of unique individuals, not statistical abstractions. Carl Jung has explicated this elegantly.

> "The statistical method shows the facts in the light of the ideal average but does not give us a picture of their empirical reality. While reflecting an indisputable aspect of reality, it can falsify the actual truth in a most misleading way. This is particularly true of theories which are based on statistics. The distinctive thing about real facts, however, is their individuality. Not to put too fine a point on it, one could say that the real picture consists of nothing but exceptions to the rule, and that, in consequence, absolute reality has predominatly the character of irregularity." (p. 17)
>
> In the statistical world (mine)...."Judged scientifically, the individual is nothing but a unit which repeats itself ad infinitum and could just as well be designated with a letter of the alphabet. For understanding, on the other hand, it is just the unique individual human being who, when stripped of all those conformities and regularities so dear to the heart of the scientist, is the supreme and only real object of investigation. The doctor, above all, should be aware of this contradiction. On the one hand, he is equipped with the statistical truths of his scientific training, and on the other, he is faced with the

task of treating a sick person who, especially in the case of psychic suffering, requires individual understanding. The more schematic the treatment is, the more resistances it -- quite rightly calls up in the patient, and the more the cure is jeopardized. The psychotherapist sees himself compelled, willy nilly, to regard the individuality of the patient as an essential fact in the picture and to arrange his methods of treatment accordingly. Today, over the whole field of medicine, it is recognized that the task of the doctor consists of treating the sick person, not an abstract illness." (Jung, 1958, pp. 17-20).

The impact of the use of present tools and paradigms in testing in particular and teaching in general, is to suppress evidence of dynamism and uniqueness. The dynamism in cognition means that the process occurs within an individual and not according to an external model of abstract average content and timing; and further, it occurs as an aspect of an interactive student-teacher-context process. The existence of unique patterns of interactive dynamism, is the reality confronted by the teacher, not the stasis suggested by our previous paradigms. For example, the popular factor from I.Q. tests called "g" is the end product of testing. But, what does the knowledge of this mysterious "g" enable a teacher or psychologist to do to improve instruction?

Key Features

The LPAD/IE system rectifies previous testing/teaching problems. It moves forward not from the inference of cognitive functions or from the inference of a single global function, but from the observation of functions. The observed functions can be anticipated because of the clinically derived cognitive map, and in particular, that portion of the cognitive map which details the specific "deficient cognitive functions" to be sought in the three phases of the cognitive act.

The LPAD/IE system does not rely upon labels for categories of learners, nor does it rely upon any consideration of etiology, since the cause of a specific deficiency will in no way modify the strategy for assessment or teaching. In all cases, the assessor/teacher begins work with what is available in cognition and moves to produce what is not by all means necessary. With the LPAD/IE system, process, treatment, and the relationship between them are explicit and are validly linked.

The LPAD/IE system is one where the assessor knows where he or she is going (because of the cognitive map), and how he or she intends to get there. Perhaps most important of all is that there is somewhere to go. This system uses several tests which we have come to think of as "standardized" tests of mentality. Yet, they are used in non-standard (in the traditional sense) ways. To be more accurate, they are used with a standard approach, but not for the purpose of the quantification of ranks for students. They are used to set up the strategies for precision remedial teaching. In this system the true "instrument" is the assessor, not the test, which no longer does most of the thinking for the psychologist. Skilled professional judgment and actions are the central core of the whole thing.

It is to the everlasting credit of Feuerstein and his associates, that they have not fallen for the temptation to close the system. Feuerstein himself has emphasized the LPAD/IE approach is not buried in particular instruments. Further, he has suggested that the list of deficient functions is tentative, approximate, and incomplete. It is the approach which is central. Parts of it which interest me most are as follows:

(1). Cause the learner to expose his/her learning processes.

(2). Analyze what is exposed by means of the cognitive map.

(3). Get learner to see the process and to evaluate the impact of changes in it. (insight)

(4). Precision mediation is initiated to modify cognitive structures.

Feuerstein and his associates do not accept the idea there there are "critical periods" for cognitive development. This theory comes from studies of imprinting in birds. His clinical results and those of others appear to bear him out.

The LPAD/IE system is based on a way of thinking not the way to think. In my own formulation from previous research (Hilliard, 1976), and in the work of others, poles of behavioral style and cognition are described. I think of analytic/objective and synthetic/personal poles which are similar to Cohen's (1971) analytic and relational, Shapiro's (1965) obsessive, compulsive and hysterical, Witkin (1954) field independent and field dependent, and Oinstein's left-brain and right-brain notions, among others. In my opinion, some of the "deficient functions" are true deficiencies which may , for example, be organic in origin. In other cases, what may appear to be "deficient functions," are merely alternative styles of processing information which have their value in certain settings. For example, too much rigor in explicitness may well impede the function of "sizing up" a whole situation. (Cohen, 1971). In fact the "efficient" cognitive functions may be "deficient" in certain settings. Typical school settings place a high value on precision, conformity to specific conventions, a narrow focus on types of information, and a full explication of what is known. The LPAD/IE system is superior in the development of cognitive structures for this pole of the cognitive continuum,

and for the remediation of problems which occur in learners due to some deep deficiency at that pole. Much more work must be done to deal with thinking at the other pole.

Implications

The Feuerstein LPAD/IE system stands in the same relationship to pedagogical strategy as Piagetian formulations did previously to educational theory, or at least to cognitive theory. In a discipline that was theory poor at the time, Piaget rescued professionals from problems of credibility and legitimacy, to the extent that his thought dominates the field of education and cognitive psychology today. Once the system is broadly understood, it could become the system in the eyes of a strategy anemic profession. This can be both good and bad. But I will say more about that later.

The LPAD/IE system can restore some of the life and excitement to education which has declined in the face of a stultifying mechanism in the classroom and school since it has as much to offer to teaching as to testing, to the teacher as to the testor. Testing practice will be improved, the communication between assessors and teachers will be more validly grounded, and above all, the LPAD/IE principles are generic to pedagogy. Helping teachers to develop a more sophisticated process for the analysis of the teaching and learning interaction, irrespective of content, can do nothing but good. The general level of professional dialogue would be raised by a quantum leap if LPAD/IE principles were understood. Moreover, as I have observed, the human quality of the teaching/learning interaction would also be improved.

A shift from traditional assessment to LPAD/IE is much more than a shift from one type of test to an alternative. It is a shift from a whole system of thought and assumptions. This has major implications for training, retraining, and

administrative structures in schools. Job descriptions, categorical, placement, methods of funding support services, goals for instruction will all be affected drastically.

A real danger exists as this better system, in my opinion, is implemented. We have taught the profession and the general public to believe in the old categories and in the static nature of learner capacity. Now, we have no way of supporting a system which is built on opposite conceptions. How do we pay for remedial services if there are no categories of learners. Heretofore, we have tied our funding to individual clients by our estimate of the number of clients who bear a general label (gifted, average, or retarded) all the time. What we need here instead is a way of tying services to specific difficulties, with some estimate of their incidence, which is independent of individual learners, since we expect that many learners will only be temporarily in need of remedial services. Even "average" or gifted learners may benefit from some of the same services.

The adoption of an LPAD/IE approach must be followed by a massive inservice and public information effort. Otherwise, the LPAD/IE system will be seen merely as an alternative way of ranking by intellect for permanent placement in a category.

We must be prepared to expect some misuses of LPAD/IE systems. Among the potential misuses which I can anticipate are these. There will be a tendency toward a mystification of the process once a corps of trained assessors exist. This will flow from the natural tendency of some people to protect themselves from competition or to elevate their status by cloaking what they do in mysteries and codes. There may also be a tendency to bring stasis thought to dynamic assessment, causing atropy in the process. This may be accomplished by viewing structures as permanent and by initiating attempts to focus on comparative ranking of

individuals by the perceived permanent structures. The first symptom of this will be when the push to score the LPAD or IE begins to emerge. Finally, because of the excellent highly developed approach to the assessment of cognition primarily on one end of a cognitive continuum, there will be a tendency to treat that pole as the whole of cognition and to ignore other aspects of the reality of human capacity which is merely extended and not deficient.

Those whose philosophy and theory excludes a knowledge of culture and its normal variations will be unable to use the LPAD/IE system properly, since such philosophies and theories also exclude the concept of intellectual change.

Conclusion

Psychologists and educators, special and regular, will owe a debt of gratitude to Feuerstein and his associates. They have provided the basis for a fundamental, valid, and vital shift in thinking and in practice.

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